

Amendments to the Drawings

The drawings are objected to because the submitted drawings are very faint, and Fig. 8 should be designated by --Prior Art--. In response, Applicant resubmits all drawings and designates --Prior Art-- in Fig. 8.

The attached sheets of drawings include amendment to Fig. 8 by designating legends --Prior Art--, and resubmitted Figs. 1-7 and 9. These sheets, which include Figs. 1-9, replace the original sheets.

Attachment: Replacement Sheets (total of 9 drawing sheets)

REMARKS/ARGUMENTS

Claims 15-27 remain pending. Claims 1-14 have been cancelled, and Claims 15-27 are currently amended. Applicant respectfully requests reconsideration in light of the following remarks.

Amendments to the Claims

Applicant has amended Claim 15 to overcome the cited prior art. Specifically, the language of the independent Claim 15 has been amended to explicitly state that “the ownership selector receives an access request having a priority level lower than the specified priority level, such that the access request having the priority level lower than the specified priority level obtains an access after all the access requests having the specified priority level have been executed at least once” as claimed. Another independent Claim 22 has been similarly amended. This amendment is supported by the originally filed specification/drawing, and thus no new matter is added.

Specification Objections

Examiner requests a substitute specification. Applicant accordingly provides the substitute specification by submitting a clean version and a marked up version under 37 CFR 1.125(c). The substitute specification contains no new matter.

Rejection of Claims 15-27 under 35 U.S.C. 112 ¶2

Claims 15-27 are rejected to under 35 USC 112, second paragraph, as being indefinite. In response, Applicant amends the claims to correct some grammatical and idiomatic errors.

Rejection of Claims 15-27 under 35 U.S.C. 103(a)

Claims 15-27 are rejected under 35 USC 103(c) as being unpatentable over Kurth (US Patent Application 2003/0177296) in view of Watts (US Patent Application 2003/0217224). Applicant respectfully traverses the rejection for the following reasons.

Kurth

Kurth is directed to dynamic request priority arbitration, in which (Figs. 1-2) agents 103 request access to resource 101 under the arbiter 102. Each agent 103 includes a selector 206, which Examiner asserts being analogous to the claimed access request selector, for selecting a priority to send in a request to the arbiter 102.

Watts

Watts is directed to reordering requests for access to subdivided resource, in which (Fig. 3) a selector 304, which Examiner asserts being analogous to the claimed ownership selector, selects a next request from the buffer 302.

Claimed invention

The claimed invention is directed to an arbitrating apparatus or arbiter. According to one aspect or embodiment of the claimed invention (e.g., Figs. 4-6), a high-priority-level ownership selector 503 is utilized to receive a normal-priority-level access request through an OR gate 607. Specifically, the OR gate 607 is coupled to receive normal-priority-level outputs of the access request selectors 601, and an output of the OR gate 607 is inputted to the last position (such as the request N in the last row of the high priority in Fig. 9) of the high-priority-level ownership selector 503. Accordingly, the normal-priority-level access request obtains an access after all of the high-priority-level access requests have been executed at least once.

Argument

The claimed invention as amended is patentable over Kurth in view of Watts primarily on the reason that the cited arts, either alone or in combination (if combinable), lack the claimed limitations.

Specifically, according to one aspect of the claimed invention, “the ownership selector receives an access request having a priority level lower than the specified priority level, such that the access request having the priority level lower than the specified priority level obtains an access after all the access requests having the specified priority level have been executed at least once” as in Claim 15. In one embodiment of the claimed invention, this feature is performed by using an “OR gate ... coupled to receive outputs of the access request

selectors having the priority level lower than the specified priority level.” Subsequently, “an output of the OR gate being inputted to the last position ... of the ownership selector having the specified priority level” as in Claim 19.

For example, in the embodiment illustrated in Figs. 4-6, the high-priority-level ownership selector 503 receives a normal-priority-level access request, such that the normal-priority-level access request obtains an access after all the high-priority-level access requests have been executed at least once. Furthermore, such feature is performed by using an OR gate 607, which is coupled to receive normal-priority-level outputs of the access request selectors 601. Subsequently, an output of the OR gate 607 is inputted to the last position (such as the request N in the last row of the high priority in Fig. 9) of the high-priority-level ownership selector 503.

According to the feature discussed above, the claimed arbitrate apparatus or arbiter can facilitate the enactment of arbitration among different priority levels, such as the flow disclosed in Fig. 2 and Fig. 3.

Examiner alleges that Watts’s selector 304 (Fig. 3) is analogous to the claimed ownership selector. However, Watts does not disclose how access requests of different priority levels can be arbitrated among (plural) selectors having different priority levels. Further, Watts does not disclose using a gate (e.g., OR gate) to accomplish the

arrangement as claimed.

For the foregoing reasons, as Kurth and Watts lack the claimed limitations, either alone or in combination (if combinable), it is respectfully submitted that the claimed invention is thus patentable over the cited prior art.

Another independent Claim 22 is traversed on the same rationale discussed above. With respect to dependent claims not specifically mentioned, it is submitted that these claims are patentable not only by virtue of their dependency on their respective base claims, but also for the totality of features recited therein.

CONCLUSION

In light of the above amendments and remarks, Applicant respectfully submits that Claims 15-27 as currently presented are in condition for allowance. Accordingly, reconsideration is respectfully requested.

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Respectfully submitted,

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